SERVICE MANUAL

MK14 Deck Mechanism Section

Deck Mechanism Part No.:
N25E1FL

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VHS
PAL

IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

STANDARD MAINTENANCE

Service Schedule of Components

This maintenance chart shows you the standard of replacement and cleaning time for each part.
Because those may replace depending on environment and purpose for use, use the chart for reference.

h: Hours ○: Cleaning ●: Replace

Deck		Periodic Service Schedule			
Ref.No.	**Part Name**	**1,000 h**	**2,000 h**	**3,000 h**	**4,000 h**
B2	Cylinder Assembly	○	●	○	●
B3	Loading Motor Assembly			●	
B8	Pulley Assembly		●		●
B587	Tension Lever Assembly		●		●
B31	ACE Head Assembly			●	
B573, B574	Reel S, Reel T			●	
B37	Capstan Motor		●		●
B52	Cap Belt		●		●
*B73	FE Head			●	
*B86	F Brake Assembly (HI)		●		●
B133	Idler Assembly (HI)		●		●
B410	Pinch Arm Assembly		●		●
B414	M Brake (SP) Assembly (HI)		●		●
B416	M Brake (TU) Assembly (HI)		●		●
B525	LDG Belt		●		●

Notes:

1. Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / ACE Head / FE Head) using 90% ethyl alcohol.
2. After cleaning the parts, do all DECK ADJUSTMENTS.
3. For the reference numbers listed above, refer to Deck Exploded Views.
   * B73 ------ Recording model only
   * B86 ------ Not used in 2 head model.

Cleaning

Cleaning of Video Head

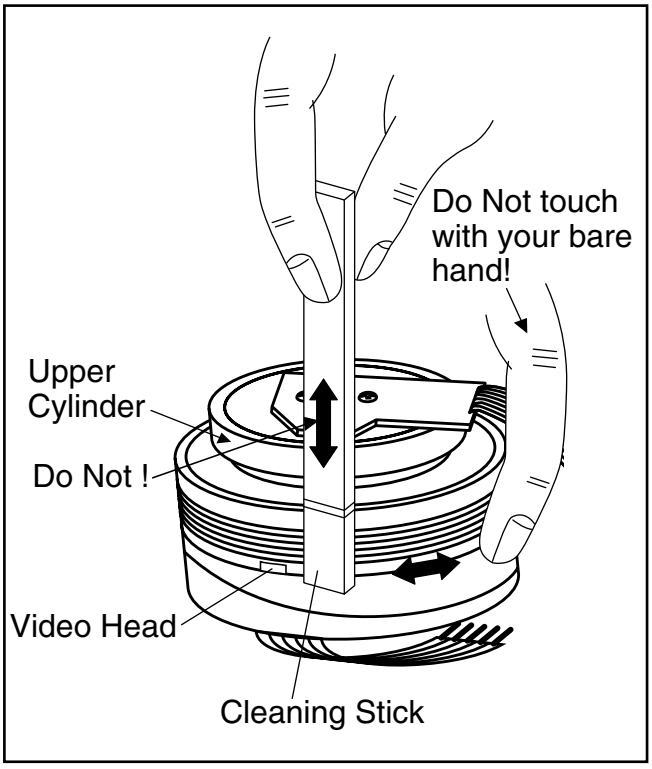
Clean the head with a head cleaning stick or chamois cloth.

Procedure

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% ethyl alcohol on the head cleaning stick or on the chamois cloth and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

Notes:

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois cloth.



Cleaning of ACE Head

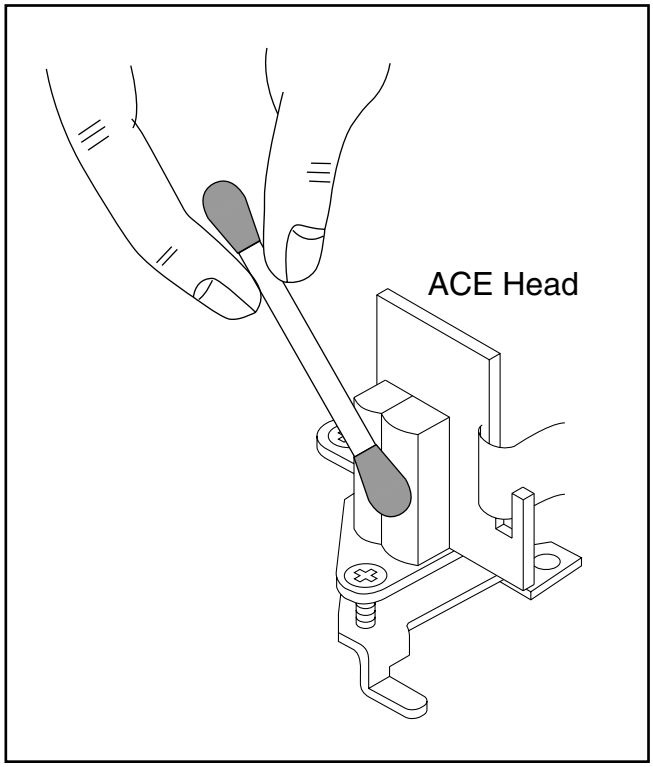
Clean the head with a cotton swab.

Procedure

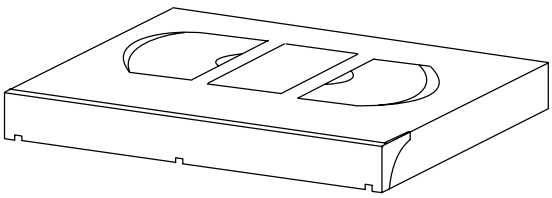
1. Remove the top cabinet.
2. Dip the cotton swab in 90% ethyl alcohol and clean the ACE Head. Be careful not to damage the upper drum and other tape running parts.

Notes:

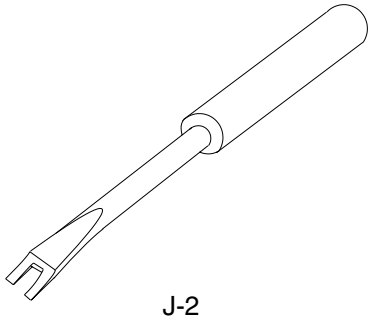
1. Avoid cleaning the ACE Head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



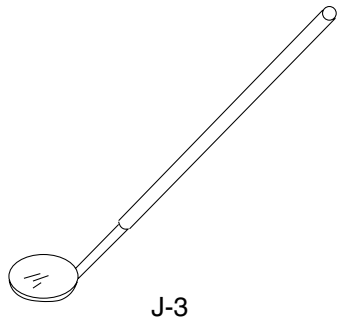
SERVICE FIXTURE AND TOOLS



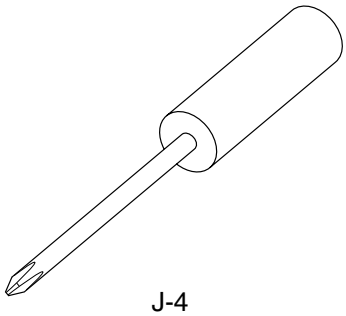
J-1-1, J-1-2



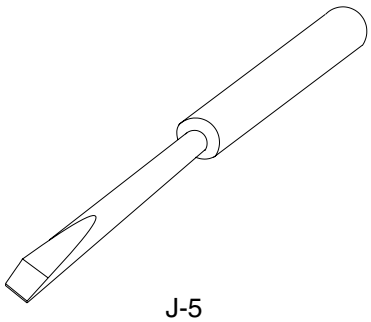
J-2



J-3



J-4



J-5

Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	FL6A	Head Adjustment of ACE Head
J-1-2	Alignment Tape	FL6N8 (2 Head model) FL6NS8 (4 Head model)	Azimuth and X Value Adjustment of ACE Head / Adjustment of Envelope Waveform
J-2	Guide Roller Adj. Screwdriver	Available Locally	Guide Roller
J-3	Mirror	Available Locally	Tape Transportation Check
J-4	Azimuth Adj. Screwdriver +	Available Locally	ACE Head Height
J-5	Flat Screwdriver -	Available Locally	X Value

MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

Service Information

A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 for a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Make sure that the Moving guide preparations are in the Eject Position.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 until the Moving guide preparations come to the Eject Position. Stop turning when the preparations begin clicking or can not be moved further. However, the tape will be left wound around the cylinder.
5. Turn the LDG Belt in the appropriate direction continuously, and the cassette tape will be ejected. Allow a minute or two to complete this task.

B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Case and Front Assembly.
3. Turn the LDG Belt in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the LDG Belt until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.

Top View

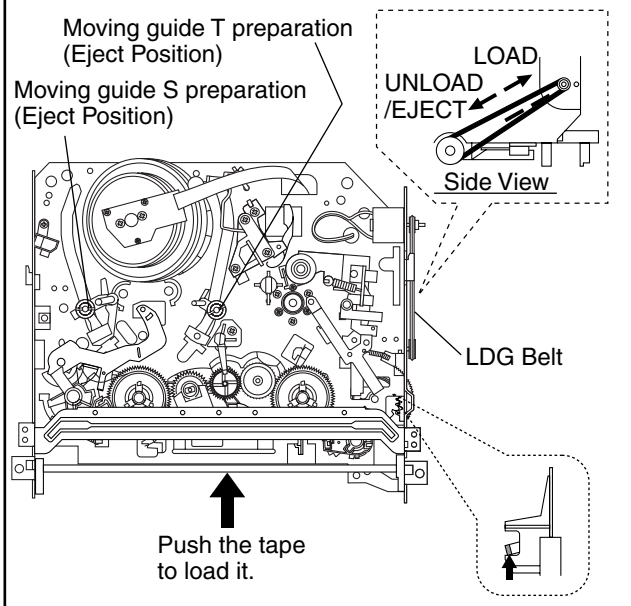


Fig. M1

Bottom View

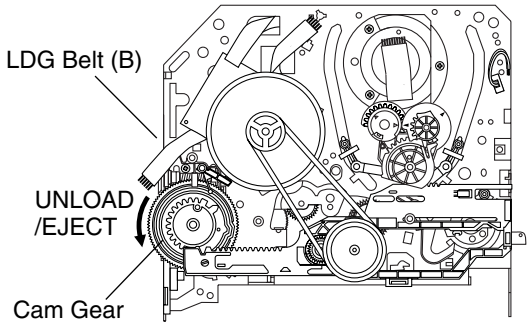


Fig. M2

1. Tape Interchangeability Alignment

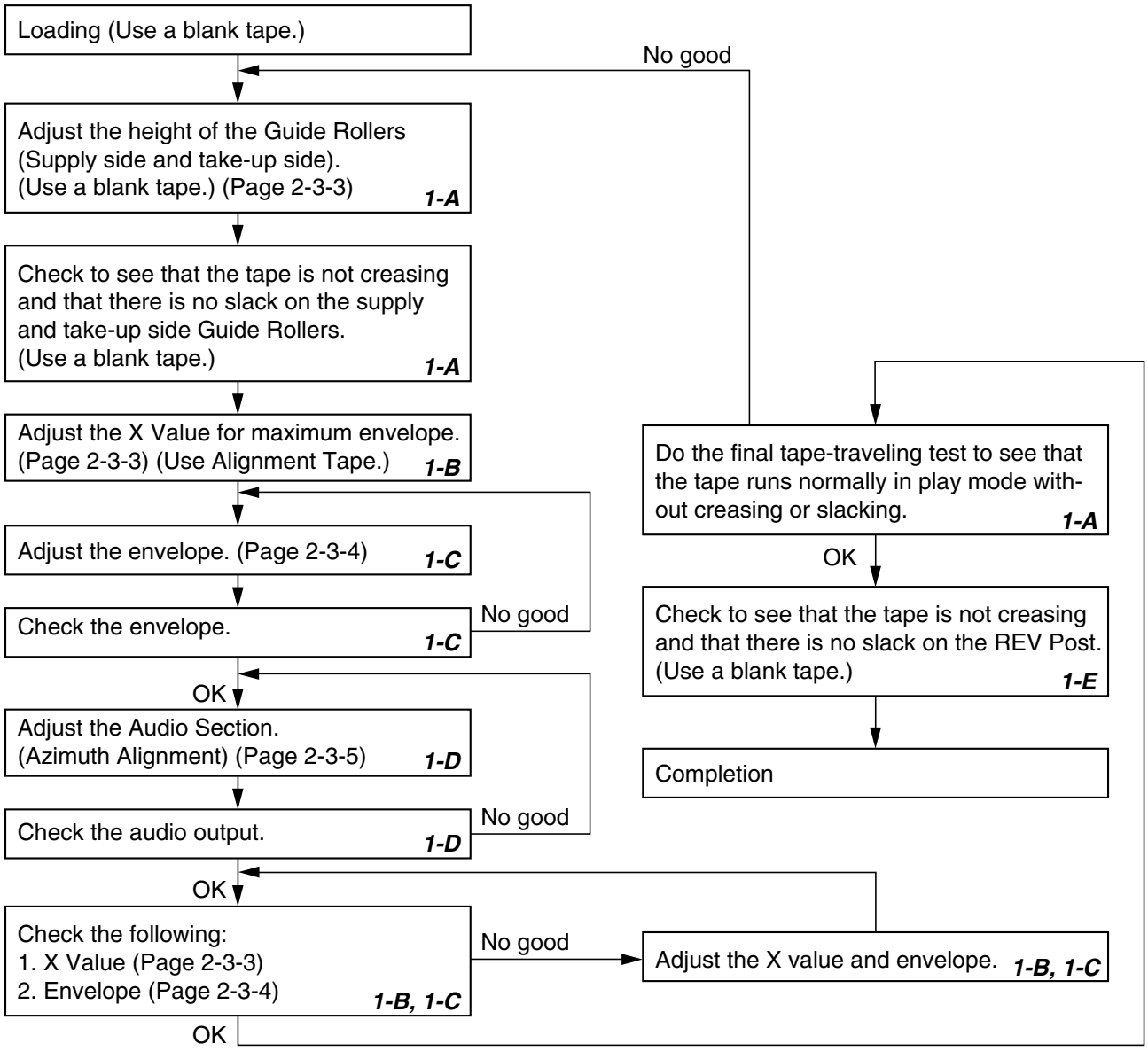
Note:
To do these alignment procedures, make sure that the Tracking Control Circuit is set to the preset position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

Equipment required:

Dual Trace Oscilloscope
VHS Alignment Tape (FL6NS8)
Guide Roller Adj. Screwdriver
Flat Screwdriver (Purchase Locally)

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

Flowchart of Alignment for tape traveling


Loading (Use a blank tape.)
Adjust the height of the Guide Rollers (Supply side and take-up side). (Use a blank tape.) (Page 2-3-3) 1-A
Check to see that the tape is not creasing and that there is no slack on the supply and take-up side Guide Rollers. (Use a blank tape.) 1-A
Adjust the X Value for maximum envelope. (Page 2-3-3) (Use Alignment Tape.) 1-B
Adjust the envelope. (Page 2-3-4) 1-C
Check the envelope. 1-C
No good
OK
Adjust the Audio Section. (Azimuth Alignment) (Page 2-3-5) 1-D
Check the audio output. 1-D
No good
OK
Check the following:
1. X Value (Page 2-3-3)
2. Envelope (Page 2-3-4) 1-B, 1-C
No good
Adjust the X value and envelope. 1-B, 1-C
OK
No good
Do the final tape-traveling test to see that the tape runs normally in play mode without creasing or slacking. 1-A
OK
Check to see that the tape is not creasing and that there is no slack on the REV Post. (Use a blank tape.) 1-E
Completion

1-A. Preliminary/Final Checking and Alignment of Tape Path

Purpose:

To make sure that the tape path is well stabilized.

Symptom of Misalignment:

If the tape path is unstable, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Playback a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig. M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)

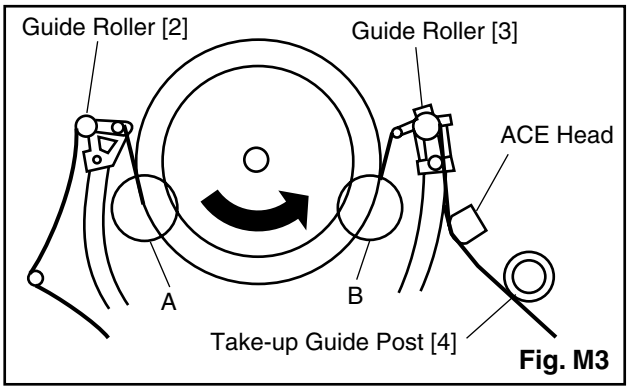


Fig. M3

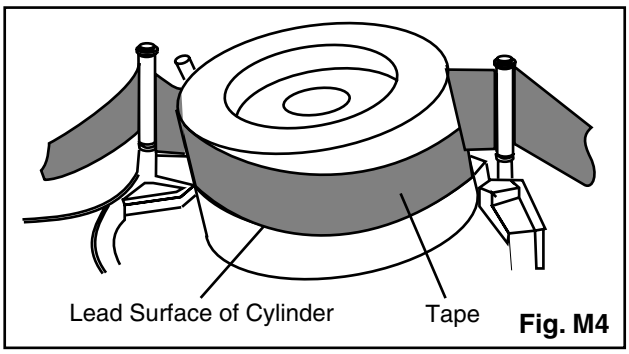


Fig. M4

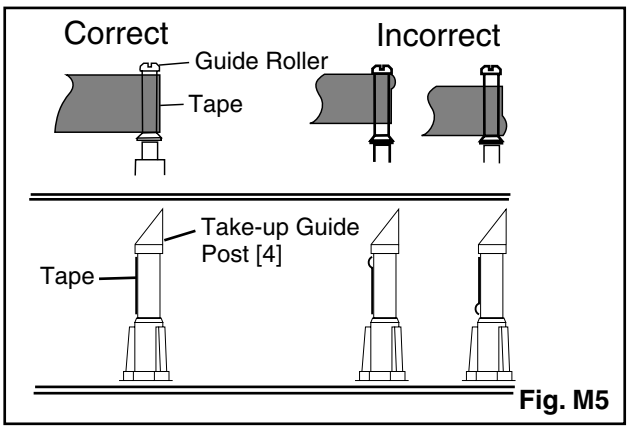


Fig. M5

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and ACE Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the ACE Head. (Fig. M6)

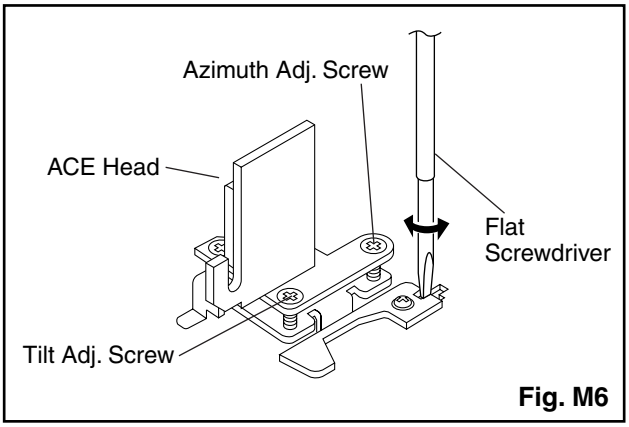


Fig. M6

1-B. X Value Alignment

Purpose:

To obtain maximum PB FM envelope signal at the preset position of the Tracking Control Circuit, align the Horizontal Position of the ACE Head.

Symptom of Misalignment:

If the Horizontal Position of the ACE Head is not properly aligned, maximum PB FM envelope cannot be obtained at the preset position of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) and TP503 (CTL) on the Main CBA. Use TP504 (RF-SW) as a trigger.
2. Playback the Gray Scale of the Alignment Tape (FL6NS8) and confirm that the PB FM signal is present.
3. Set the Tracking Control Circuit to the preset position by pressing CH UP button and then “PLAY” button on the unit. (Refer to note on bottom of page 2-3-4.)
4. Use the Flat Screwdriver so that the PB FM signal at TP301 (C-PB) is maximum. (Fig. M6)

5. To shift the CTL waveform, press CH UP or CH DOWN button on the remote control unit. Then make sure that the maximum output position of PB FM envelope signal becomes within ±2ms from preset position.

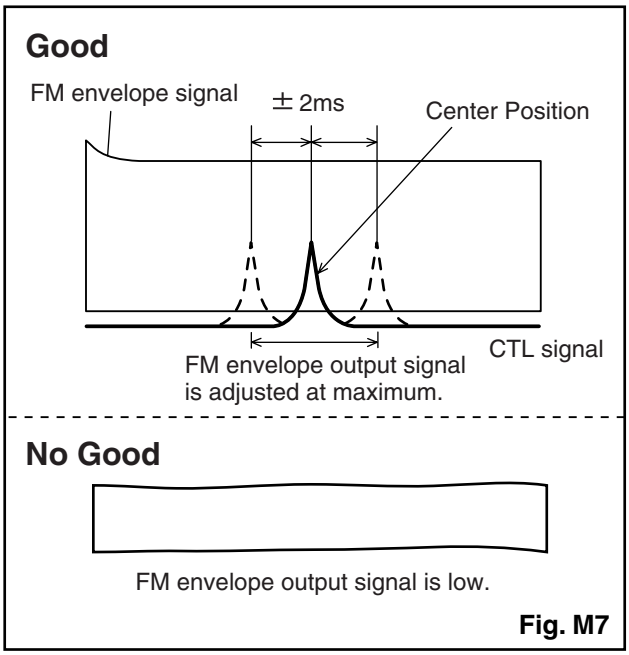


Fig. M7

6. Set the Tracking Control Circuit to the preset position by pressing CH UP button and then "PLAY" button on the unit.

1-C. Checking/Adjustment of Envelope Waveform

Purpose:

To achieve a satisfactory picture, adjust the Guide Rollers so that the PB FM envelope becomes as flat as possible.

Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) on the Main CBA. Use TP504 (RF-SW) as a trigger.
2. Playback the Gray Scale on the Alignment Tape (FL6NS8). Set the Tracking Control Circuit to the preset position by pressing CH UP button and then "PLAY" button on the unit. Adjust the height of Guide Rollers [2] and [3] (Fig. M3, Page 2-3-3) watching the oscilloscope display so that the envelope becomes as flat as possible. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
3. If the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
4. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
5. When Guide Rollers [2] and [3] (Refer to Fig. M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.

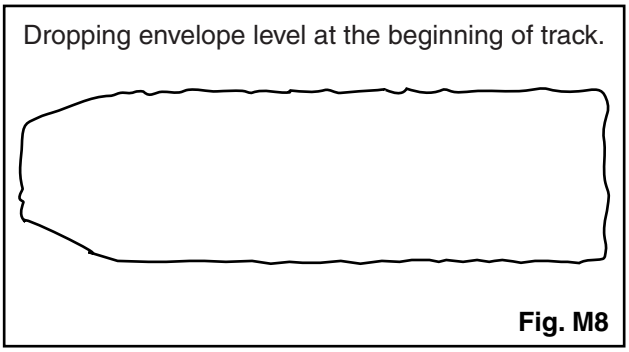


Fig. M8

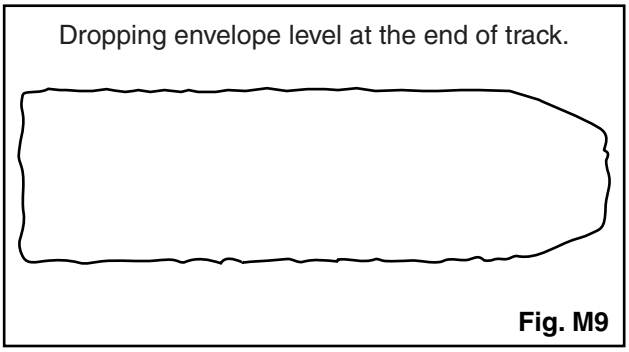


Fig. M9

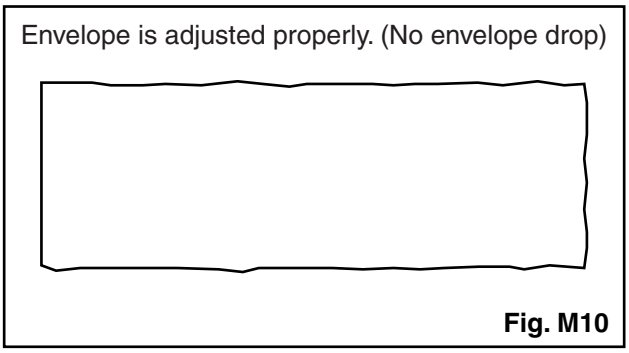


Fig. M10

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the CH UP or DOWN buttons on the unit alternately, to check the symmetry of the envelope. Check the number of pushes to ensure preset position. The number of pushes of the CH UP button on the unit to achieve 1/2 level of envelope should match the number of pushes of the CH DOWN button on the unit from center. If required, redo the "X Value Alignment."

1-D. Azimuth Alignment of Audio/Control/ Erase Head

Purpose:

To correct the Azimuth alignment so that the Audio/ Control/Erase Head meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Playback the alignment tape (FL6NS8) and confirm that the audio signal output level is 8kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform on the oscilloscope is at maximum. (Fig. M6)

Note: Upon completion of the adjustment of Azimuth Adj. Screw, check the X Value by pushing the CH UP or DOWN buttons on the unit alternately, to check the symmetry of the envelope. Check the number of pushes to ensure preset position. The number of pushes of the CH UP button on the unit to achieve 1/2 level of envelope should match the number of pushes of the CH DOWN button on the unit from center. If required, redo the “X Value Alignment.”

1-E. Checking and Alignment of Tape Path during reversing

Purpose:

To make sure that the tape path is well stabilized during reversing.

Symptom of Misalignment:

If the tape path is unstable during reversing, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Insert a blank cassette tape into the tray and set the unit to REV. Then confirm if the tape has been curled up or bent at the Take-up Guide Post[4] or REV Post[5]. (Refer to Fig. M11 and M12.)
2. When the tape has been curled up or bent, turn the alignment screw to adjust the height of REV Post. (Refer to Fig. M11 and M13.)

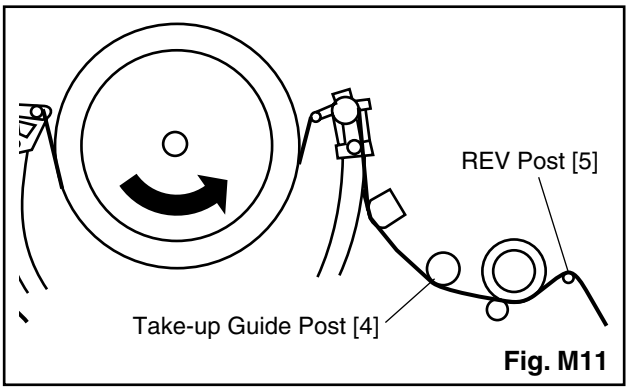


Fig. M11

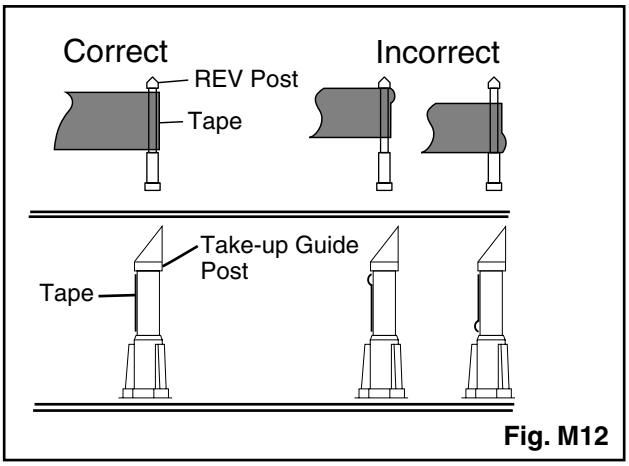


Fig. M12

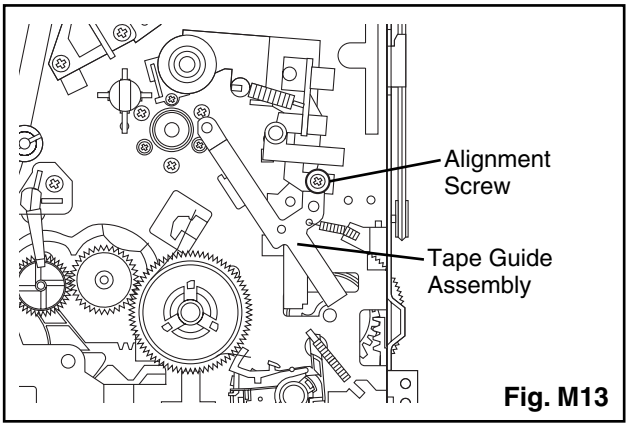


Fig. M13

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS.)
All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [44] and [45] in Fig. DM1H on page 2-4-3. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Guide Holder A	T	DM3H	2(S-1)	
[2]	[1]	Cassette Holder Assembly	T	DM4H		
[3]	[2]	Slider (SP)	T	DM5H	(S-1A), *(L-1)	
[4]	[2]	Slider (TU)	T	DM5H	*(L-2)	
[5]	[4]	Lock Lever	T	DM5H	*(L-3), *(P-1)	
[6]	[2]	Cassette Plate	T	DM5H		
[7]	[7]	Cylinder Assembly	T	DM1H, DM6H	Desolder, 3(S-2)	
[8]	[8]	Loading Motor Assembly	T	DM1H, DM7H	Desolder, LDG Belt, 2(S-3)	
[9]	[9]	ACE Head Assembly	T	DM1H, DM7H	(S-4)	
[10]	[2]	Tape Guide Arm Assembly	T	DM1H, DM8H-1	*(P-2)	
[11]	[10]	C Door Opener	T	DM1H, DM8H-1	(S-4A), *(L-4)	
[12]	[11]	Pinch Arm (B)	T	DM1H, DM8H-1, DM8H-2	*(P-3)	
[13]	[12]	Pinch Arm (A) Assembly	T	DM1H, DM8H-1, DM8H-2		
[14]	[14]	FE Head	T	DM1H, DM9H	(S-5)	
[15]	[15]	Prism	T	DM1H, DM9H	(S-6)	
[16]	[2]	Slider Shaft	T	DM10H	*(L-5)	
[17]	[16]	C Drive Lever (SP)	T	DM10H		
[18]	[16]	C Drive Lever (TU)	T	DM10H	(S-7), *(P-4)	
[19]	[19]	Capstan Motor	B	DM2H, DM11H	3(S-8), Cap Belt	
[20]	[20]	Clutch Assembly (HI)	B	DM2H, DM12H	(C-1)	
[21]	[20]	Center Gear	B	DM12H		
*[22]	[22]	F Brake Assembly (HI)	B	DM2H, DM12H	*(L-6)	
[23]	[22]	Worm Holder	B	DM2H, DM13H-1	(S-9), *(L-7), *(L-8)	
[24]	[22]	Pulley Assembly (HI)	B	DM2H, DM13H-1		
[25]	[25]	Mode Gear (LM)	B	DM2H, DM13H-1	(C-2)	
[26]	[20],[25]	Mode Lever (HI)	B	DM2H, DM13H-1, DM13H-2	(C-3)	
[27]	[22],[23], [26]	Cam Gear (A) (HI)	B	DM2H, DM13H-1, DM13H-2	(C-4)	(+)Refer to Alignment Sec.Page 2-5-1
[28]	[26]	TR Gear C	B	DM2H, DM13H-1	(C-5)	
[29]	[28]	TR Gear Spring	B	DM13H-1		
[30]	[29]	TR Gear A/B	B	DM13H-1		
[31]	[31]	FF Arm (HI)	B	DM1H, DM14H		
[32]	[26]	Idler Assembly (HI)	B	DM1H, DM14H	*(L-9)	
[33]	[26]	BT Arm	B	DM2H, DM14H	*(P-5)	

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[34]	[26]	Loading Arm (SP) Assembly	B	DM2H, DM14H		(+)Refer to Alignment Sec.Page 2-5-1
[35]	[34]	Loading Arm (TU) Assembly	B	DM2H, DM14H		(+)Refer to Alignment Sec.Page 2-5-1
[36]	[16],[26]	M Brake (TU) Assembly (HI)	T	DM1H, DM15H		
[37]	[2],[26]	M Brake (SP) Assembly (HI)	T	DM1H, DM15H	*(P-6)	
[38]	[37]	Tension Lever Assembly	T	DM1H, DM15H		
[39]	[38]	T Lever Holder	T	DM15H	*(L-10)	
[40]	[40]	M Gear (HI)	T	DM1H, DM15H	(C-6)	
[41]	[15],[40]	Sensor Gear (HI)	T	DM1H, DM15H	(C-7)	
[42]	[36],[40]	Reel T	T	DM1H, DM15H		
[43]	[38]	Reel S	T	DM1H, DM15H		
[44]	[34],[38]	Moving Guide S Preparation	T	DM1H, DM16H	(S-11), Slide Plate	
[45]	[35]	Moving Guide T Preparation	T	DM1H, DM16H		
[46]	[19]	TG Post Assembly	T	DM1H, DM16H	*(L-11)	
[47]	[27]	Rack Assembly	R	DM17H		(+)Refer to Alignment Sec.Page 2-5-1
[48]	[47]	F Door Opener	R	DM17H		
[49]	[49]	Cleaner Assembly	T	DM1H, DM6H		
[50]	[49]	CL Post	T	DM6H	*(L-12)	
↓ (1)	↓ (2)	↓ (3)	↓ (4)	↓ (5)	↓ (6)	↓ (7)

(1): Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

(2): Indicates the part to start disassembling with in order to disassemble the part in column (1).

(3): Name of the part

(4): Location of the part: T=Top B=Bottom R=Right L=Left

(5): Figure Number

(6): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw, *=Unhook, Unlock, Release, Unplug, or Desolder
e.g., 2(L-2) = two Locking Tabs (L-2).

(7): Adjustment Information for Installation
(+):Refer to Deck Exploded Views for lubrication.

.

*** [22] F Brake Assembly (HI) is not used in 2 head model.**

Top View

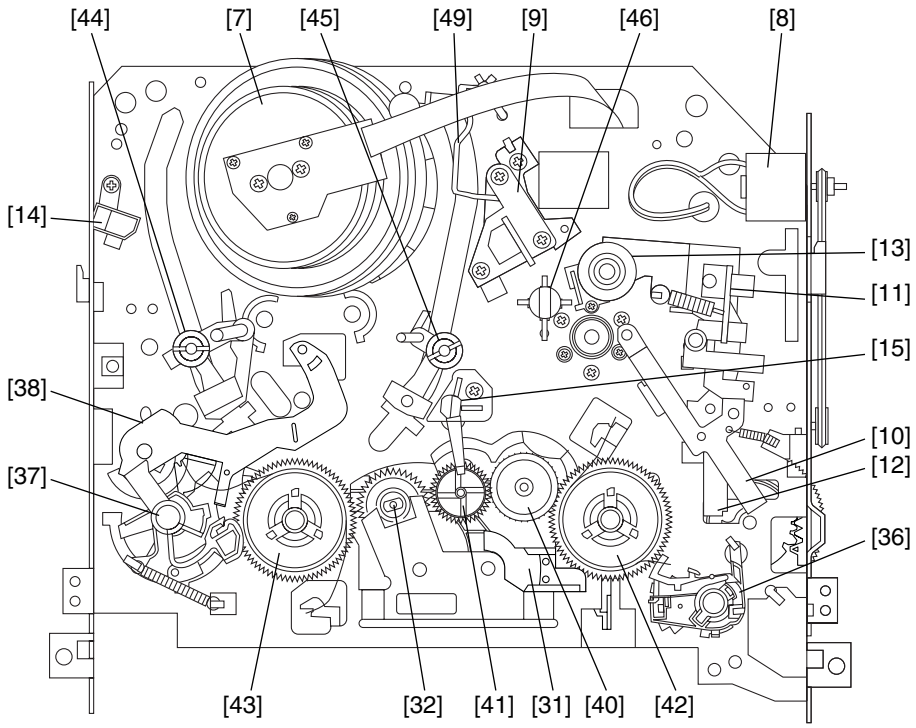


Fig. DM1H

Bottom View

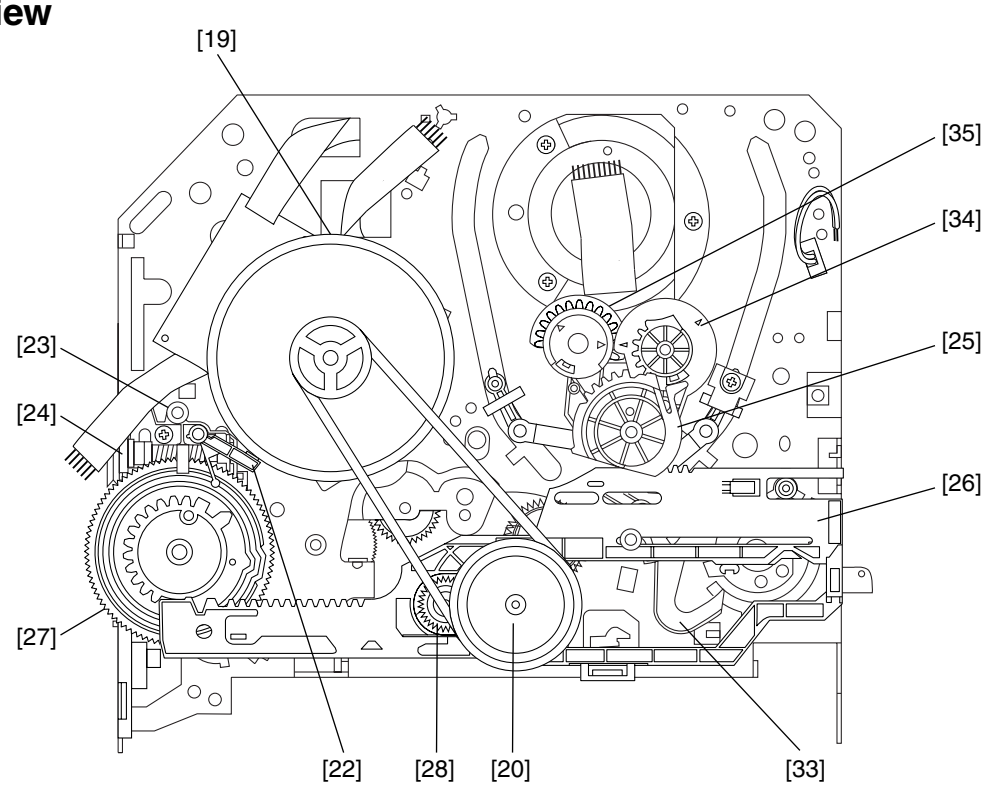


Fig. DM2H

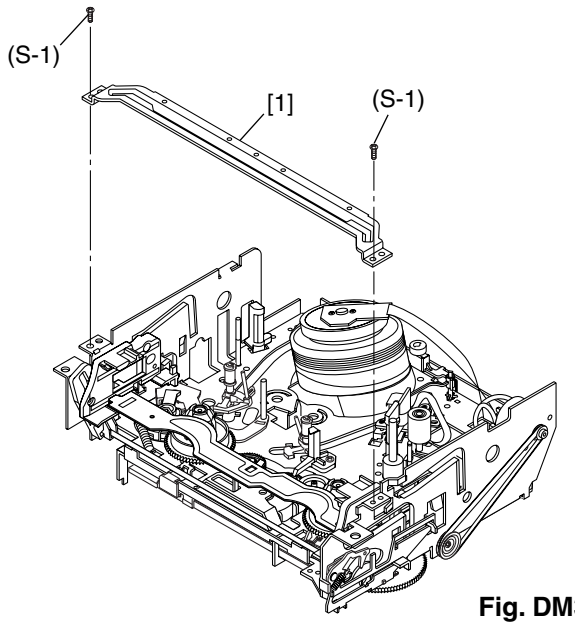
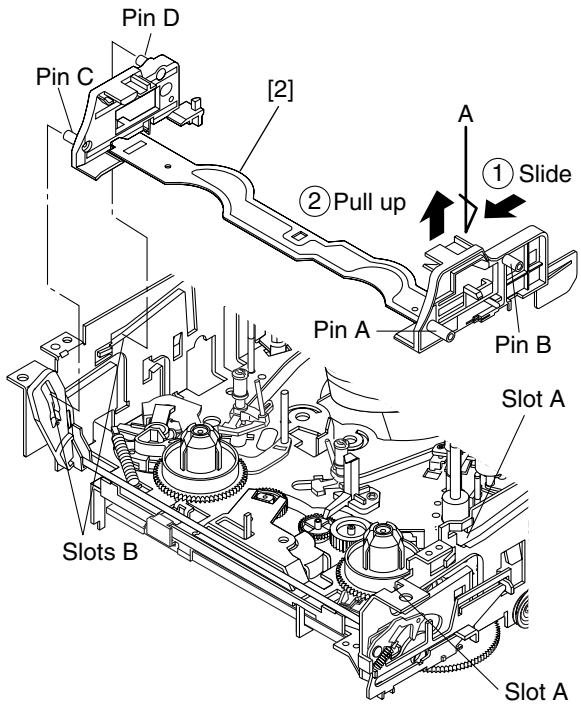


Fig. DM3H



First, while pushing the locking tab as shown in the right, slide and pull up the right side on [2] to release Pin A and Pin B from the slots A.
Then, remove Pin C and Pin D on [2] from the slots B as shown.

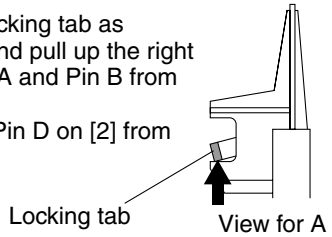
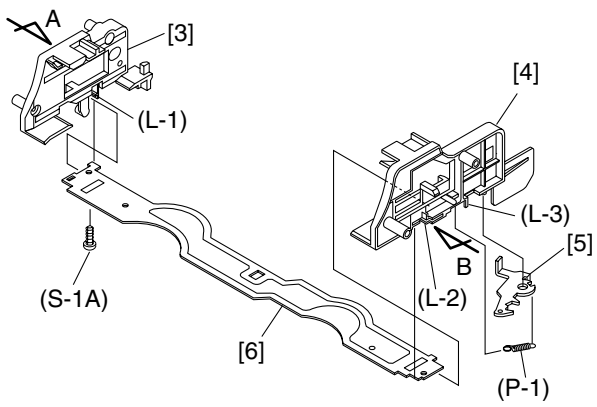
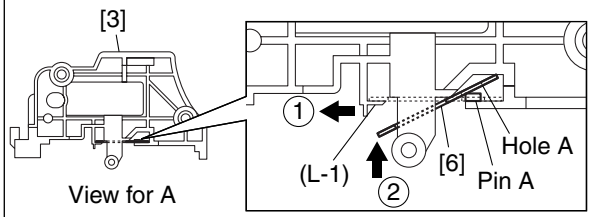


Fig. DM4H



Installation of [3] and [6]

First, insert [6] diagonally in [3] as shown below. Then, install [6] in [3] while pushing (L-1) in a direction of arrow. After installing [6] in [3], confirm that pin A of [3] enters hole A of [6] properly.



Installation of [4] and [6]

Install [6] in [4] while pulling (L-2) in a direction of arrow. After installing [6] in [4], confirm that pin B of [4] enters hole B of [6] properly.

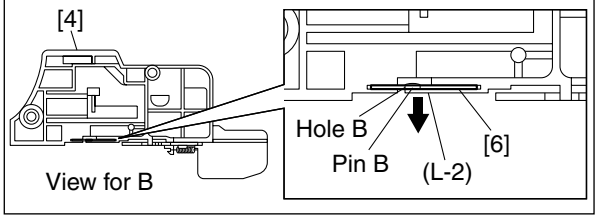


Fig. DM5H

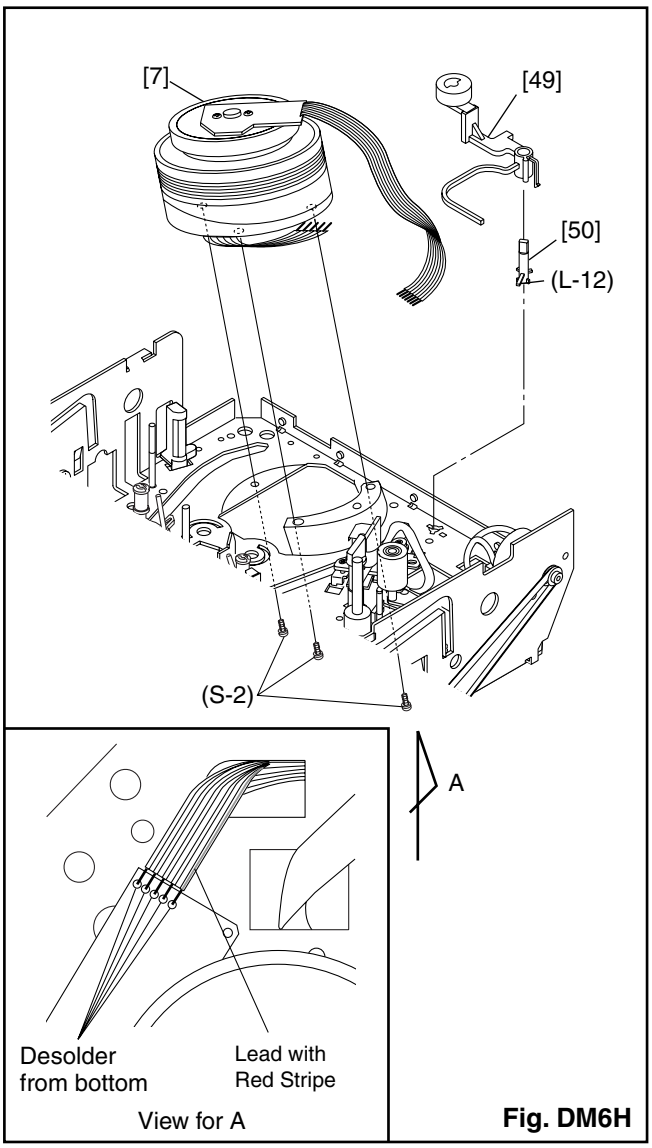


Fig. DM6H

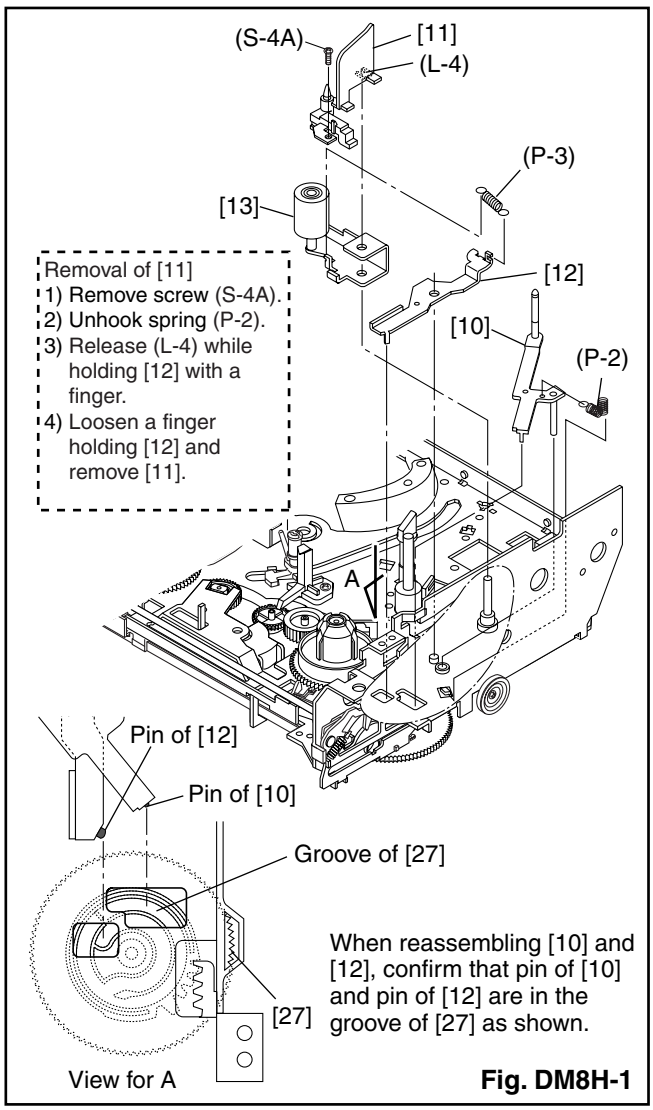


Fig. DM8H-1

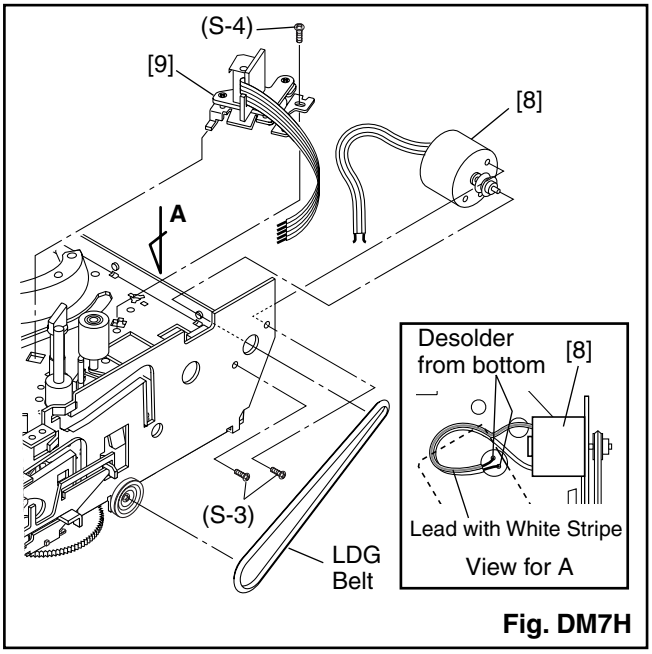


Fig. DM7H

Installation of [13] and [12]

Hook spring (P-3) up to [12] and [13], then install them to the specified position so that [12] will be floated slightly while holding [12] and [13]. (Refer to Fig. A.)

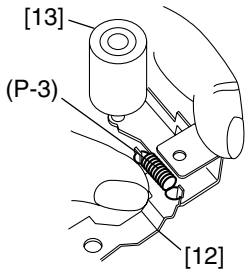


Fig. A

Install pin of [12] in groove of [27]. (Refer to Fig. B.)

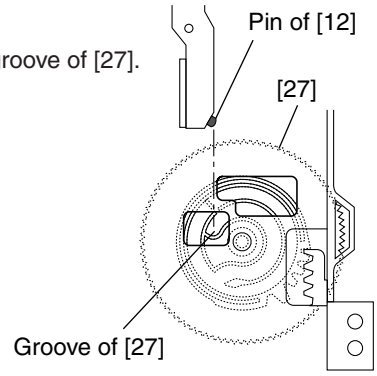


Fig. B (Top view)

Press both [12] and [13] till the groove of chassis pin appears, and adjust [13] to the notch of chassis. Then turn [13] a little in the direction of the arrow while pressing [12]. (Refer to Fig. C.)

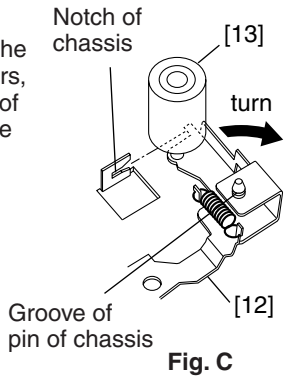


Fig. C

Install [11] and [10] while holding [12]. (Refer to Fig. DM8H-1.)

Fig. DM8H-2

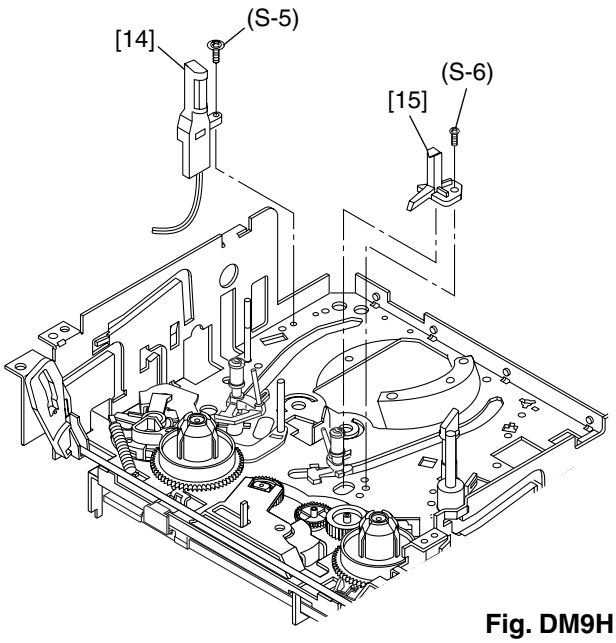


Fig. DM9H

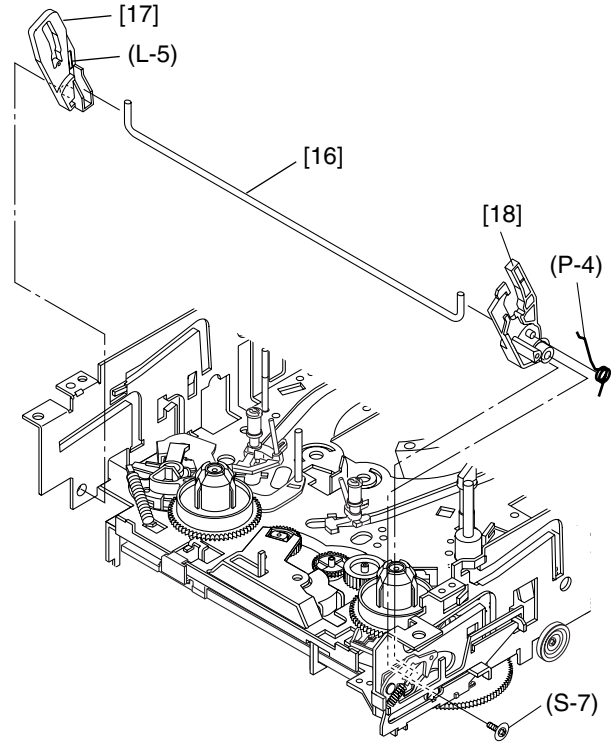
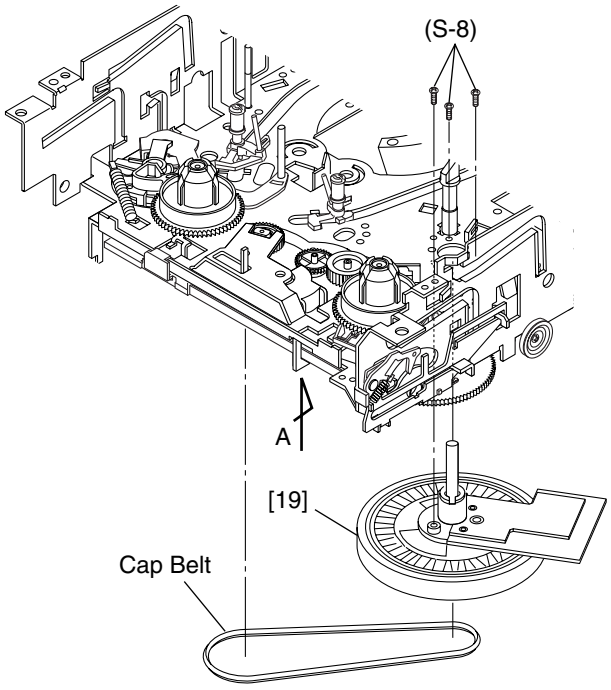
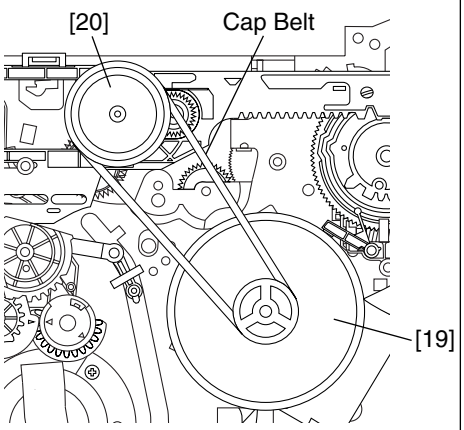


Fig. DM10H

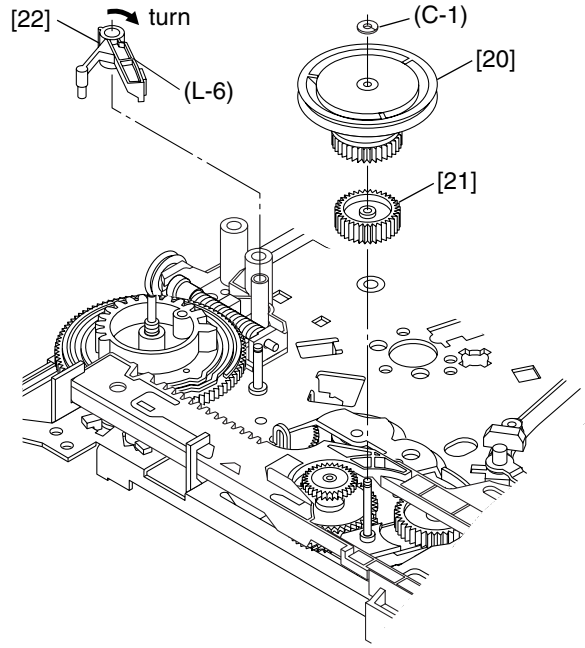


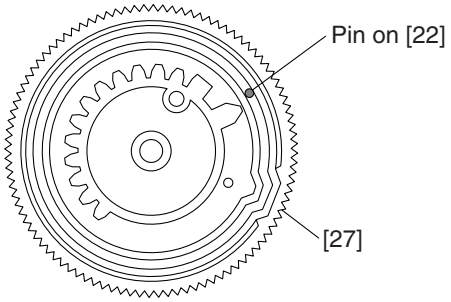
Installation position of Cap Belt



View for A

Fig. DM11H





Position of pin on [22]

Fig. DM12H

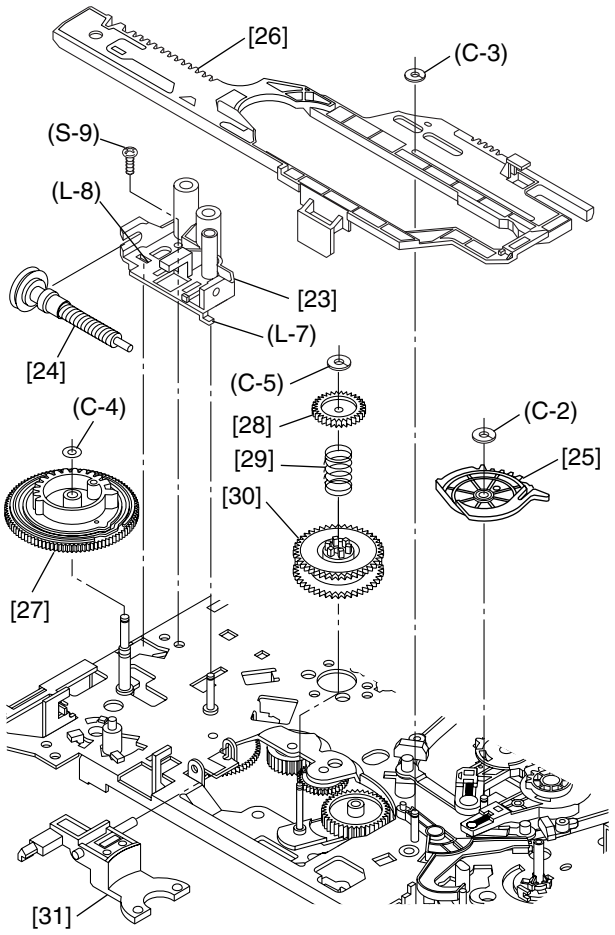
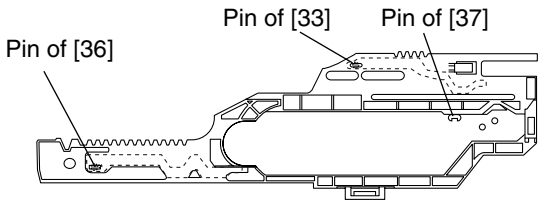
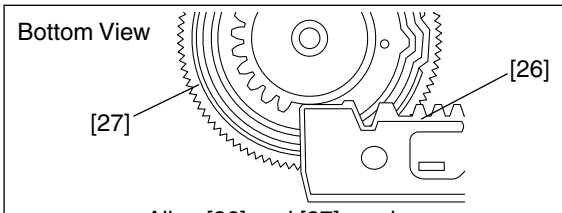


Fig. DM13H-1

Installation of [26]

Position of Mode Lever when installed





Align [26] and [27] as shown.

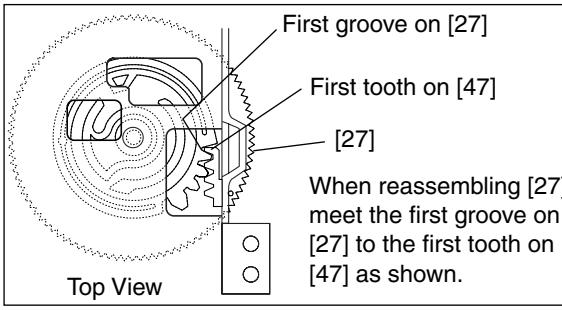

First groove on [27]
First tooth on [47]
[27]
When reassembling [27], meet the first groove on [27] to the first tooth on [47] as shown.
Top View

Fig. DM13H-2

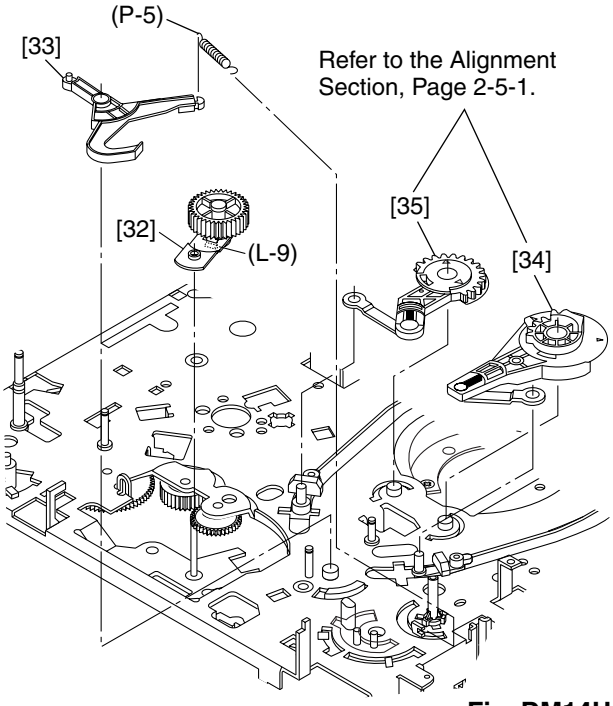


Fig. DM14H

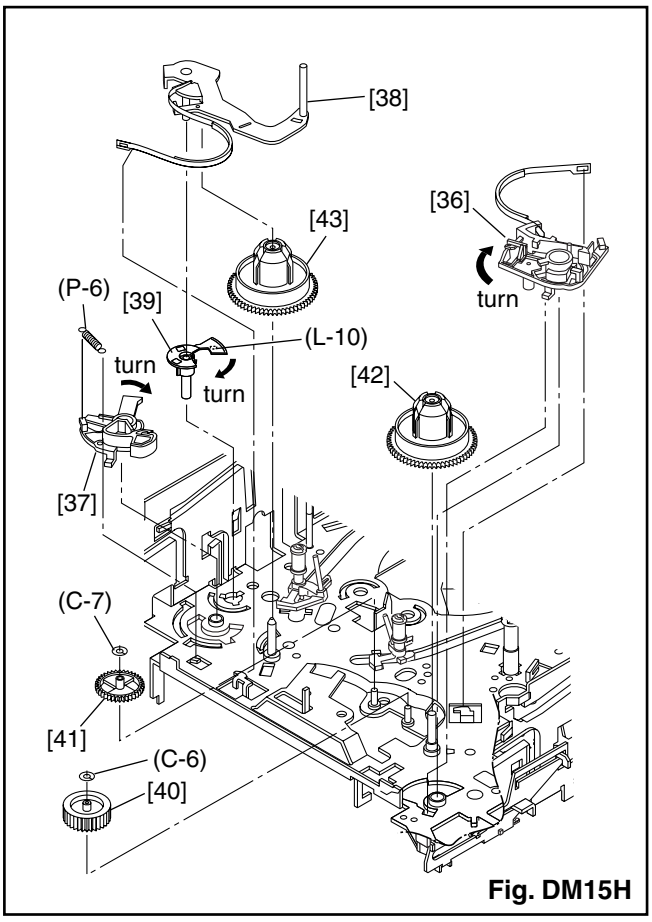


Fig. DM15H

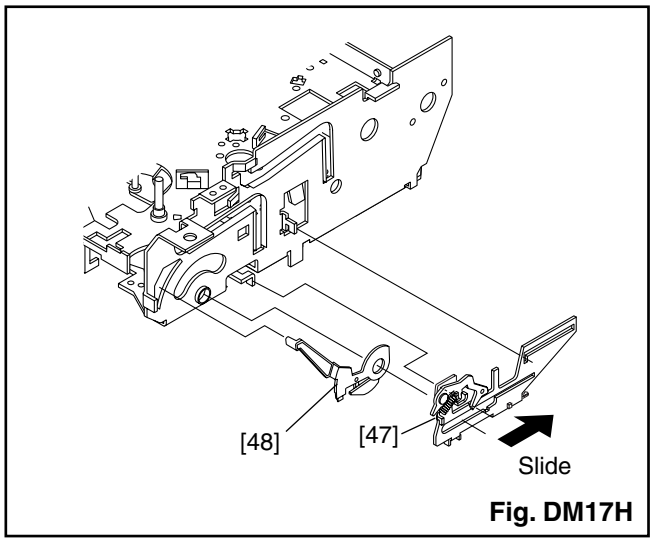


Fig. DM17H

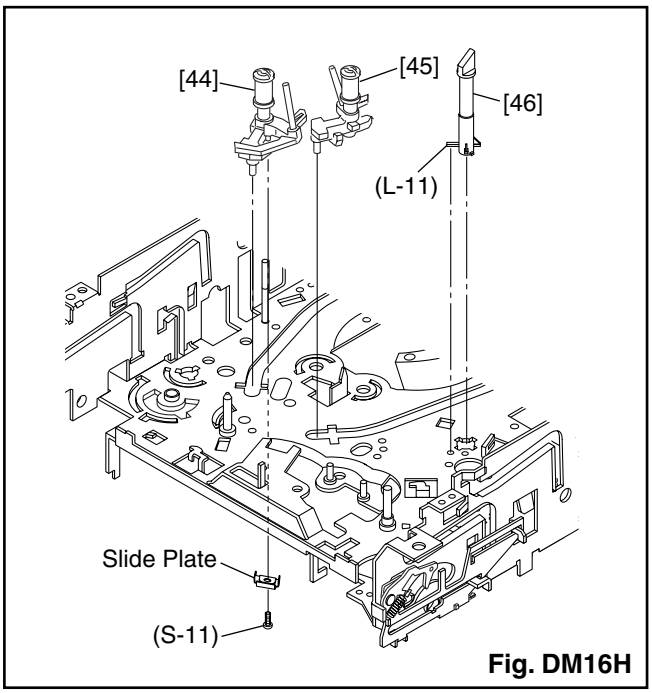


Fig. DM16H

ALIGNMENT PROCEDURES OF MECHANISM

The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

All alignments are to be performed with the mechanism in Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

Alignment points in Eject Position

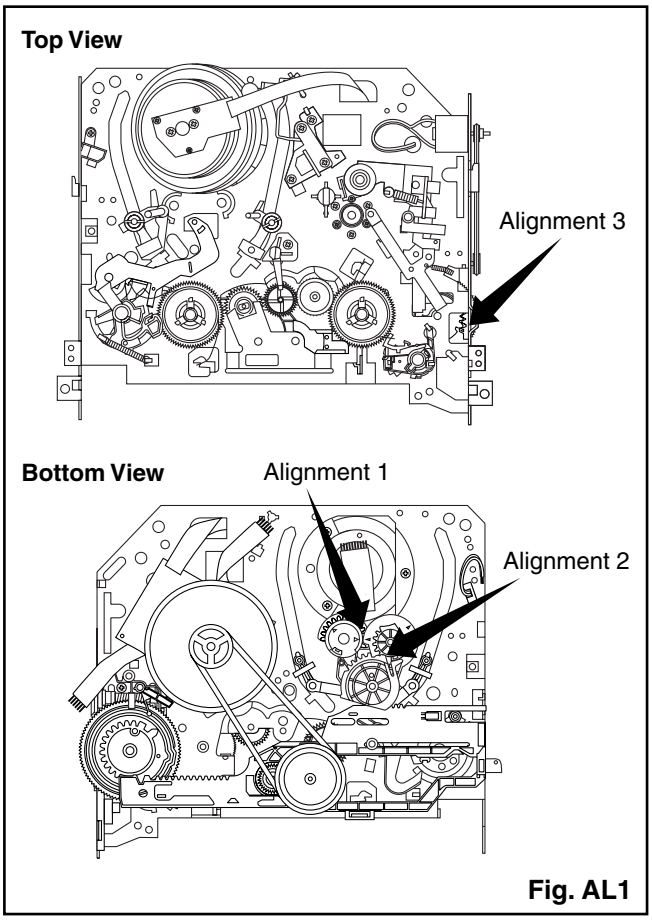


Fig. AL1

Alignment 1

Loading Arm (SP) and (TU) Assembly

Install Loading Arm (SP) and (TU) Assembly so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

Mode Gear

Keeping the two triangles pointing at each other, install the Loading Arm (SP) Assembly so that the last tooth of the gear meets the most inside teeth of the Mode Gear. See Fig. AL2.

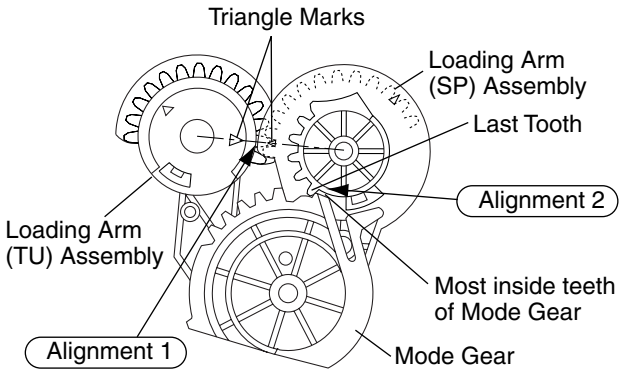


Fig. AL2

Alignment 3

Cam Gear (A) (HI), Rack Assembly

Install the Rack Assembly so that the first tooth on the gear of the Rack Assembly meets the first groove on the Cam Gear (A) (HI) as shown in Fig. AL3.

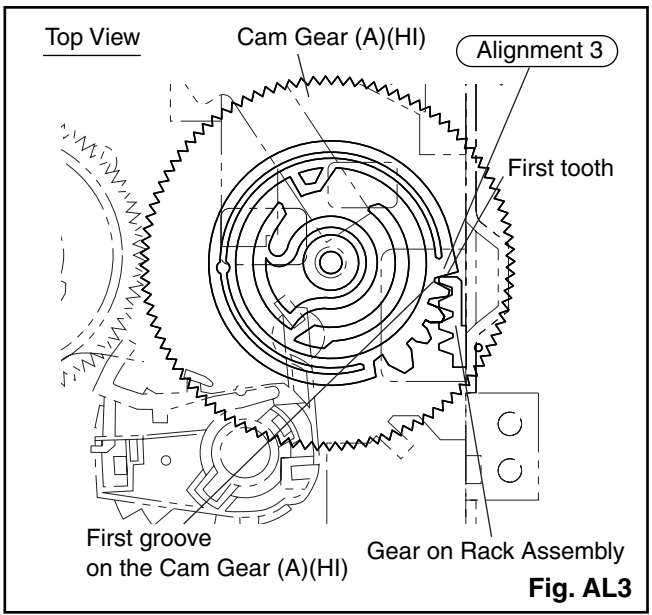
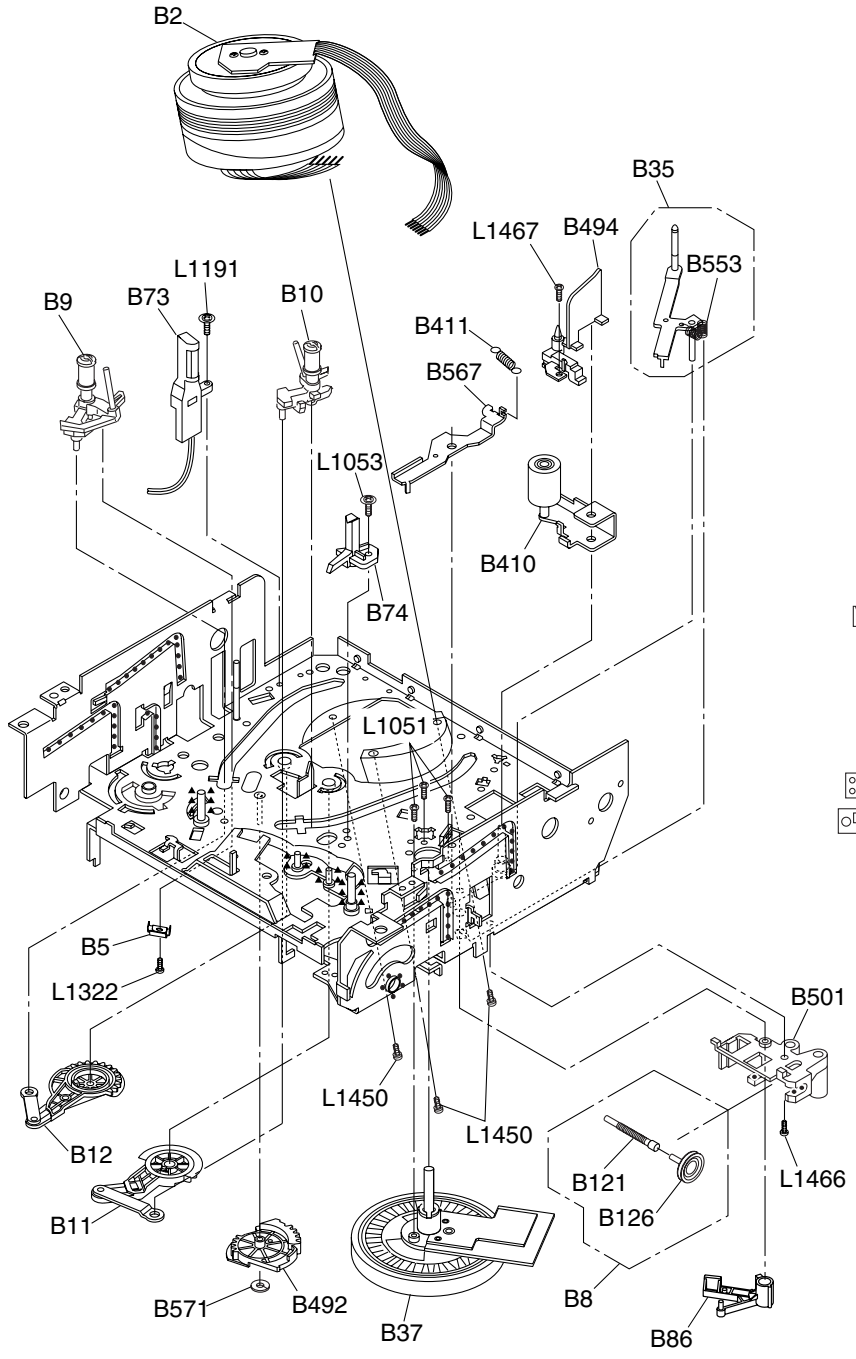


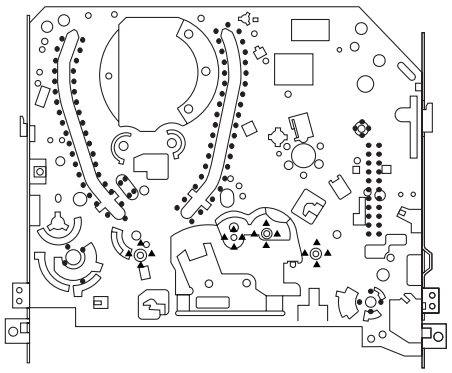
Fig. AL3

DECK EXPLODED VIEWS

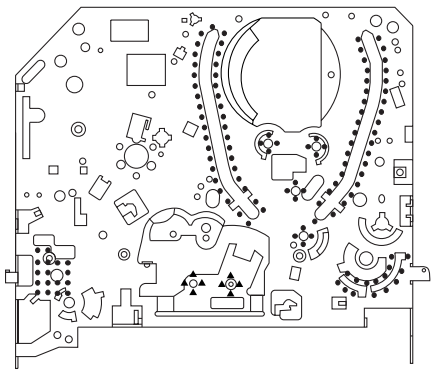
Deck Mechanism View 1

Mark	Description
●●●●●	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150





Chassis Assembly
Top View (Lubricating Point)

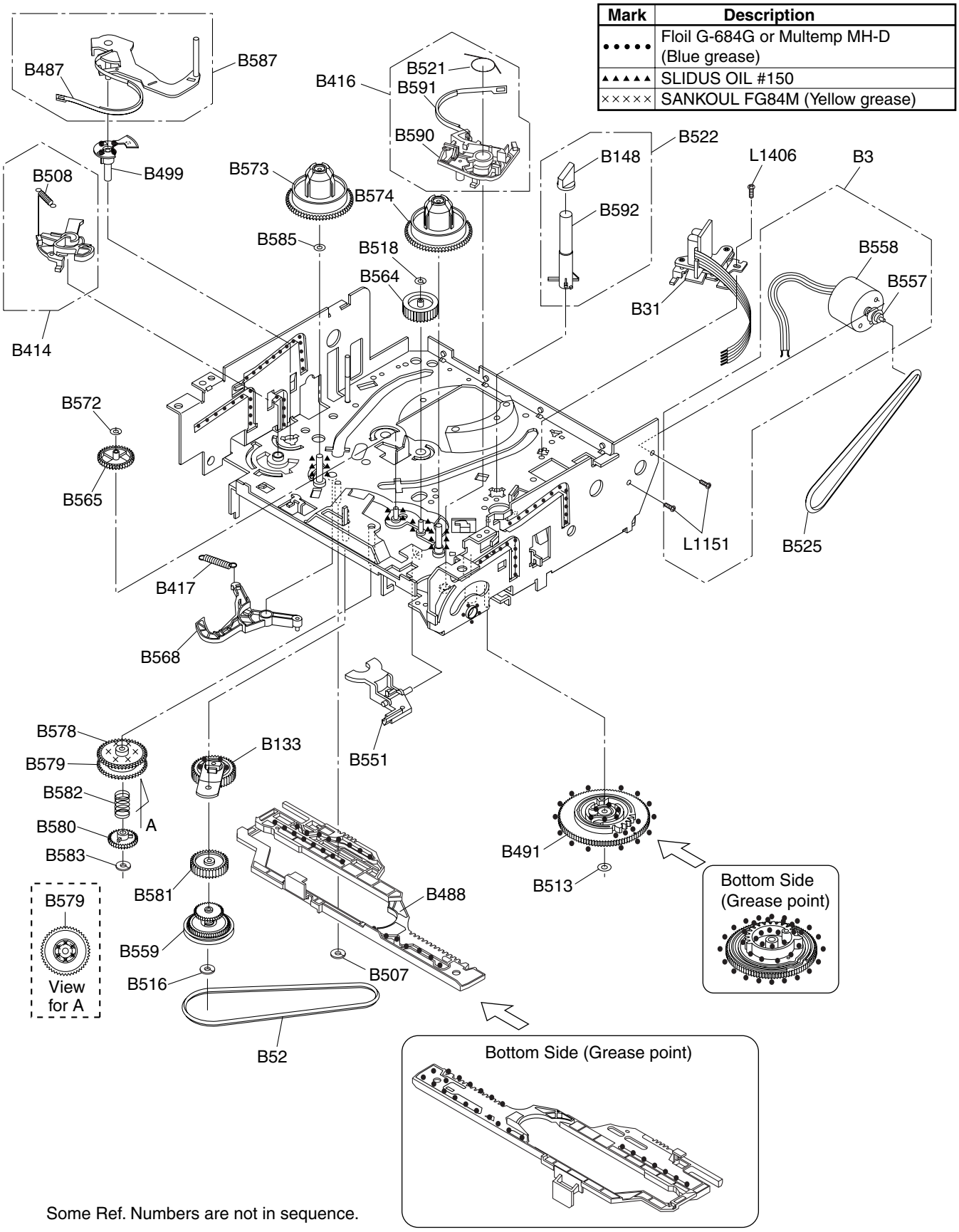


Chassis Assembly
Bottom View (Lubricating Point)

Some Ref. Numbers are not in sequence.

Deck Mechanism View 2

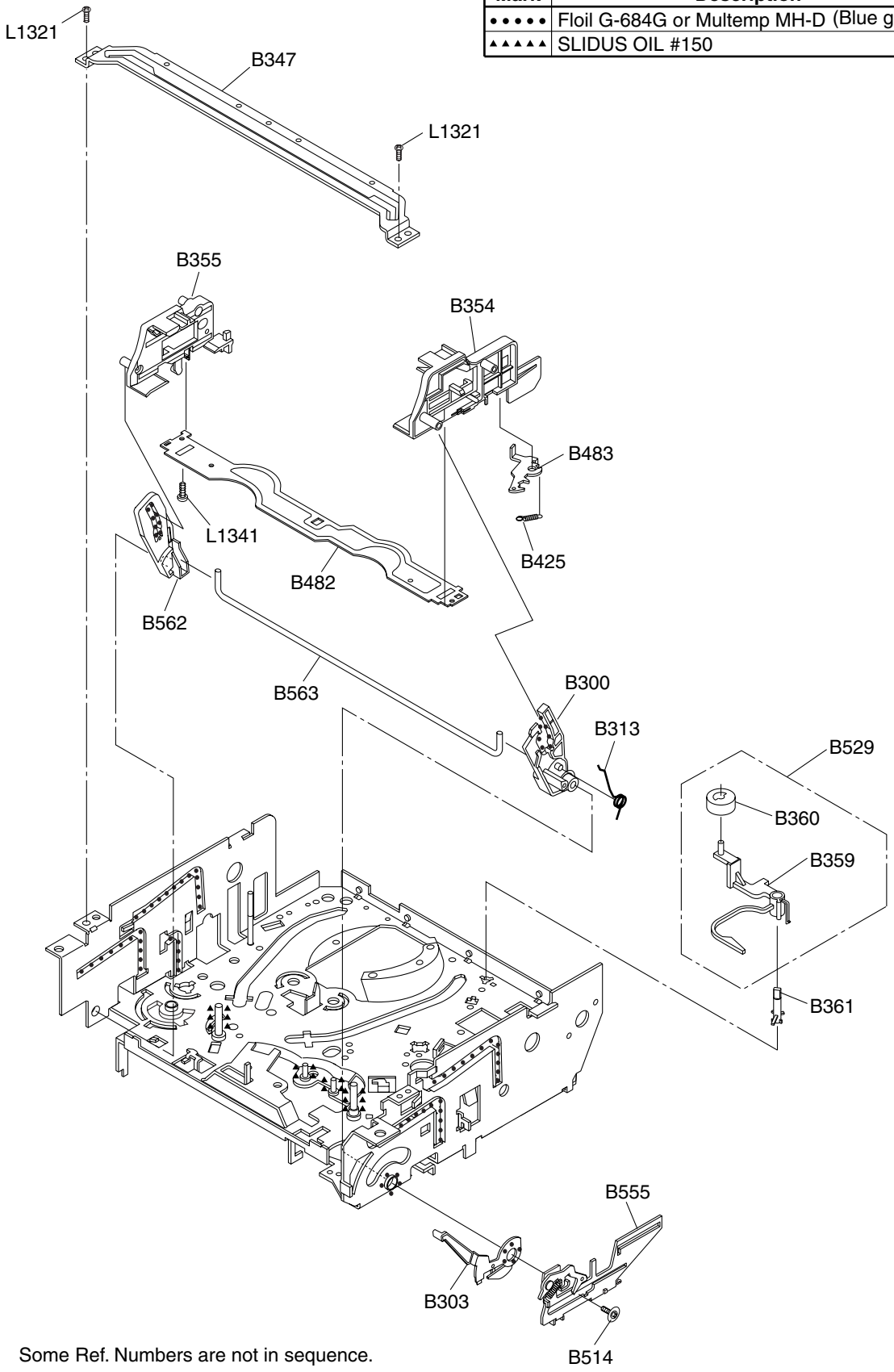
Mark	Description
●●●●●	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150
×××××	SANKOUL FG84M (Yellow grease)



Some Ref. Numbers are not in sequence.

Deck Mechanism View 3

Mark	Description
●●●●●	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150



Some Ref. Numbers are not in sequence.

DECK PARTS LIST

Ref. No.	Description	Part No.
B2	CYLINDER ASSEMBLY MK12.5 PAL 6HD or	N236CCYL
	CYLINDER ASSEMBLY MK12.5 PAL 6HD(V)	N236DCYL
B3	LOADING MOTOR ASSEMBLY MK14	1VSA12912
B5	SLIDE PLATE MK12.5	0VM416429
B8	PULLEY ASSEMBLY(HI) MK12	0VSA13501
B9	MOVING GUIDE S P.P MK12.5	1VSA12887
B10	MOVING GUIDE T P.P MK12.5	1VSA12886
B11	LOADING ARM(TU) ASSEMBLY MK12	1VSA12880
B12	LOADING ARM(SP) ASSEMBLY MK12	1VSA12879
B31	AC HEAD ASSEMBLY MK12.5	1VSA12888
B35	TAPE GUIDE ARM ASSEMBLY MK12.5	1VSA12889
B37	CAPSTAN MOTOR HI 288/VCZC1301	N9688CML
B52	CAP BELT MK10	0VM411138
B73	FE HEAD(MK12) HVFHP0047A or	DHVEC01AL007
	FE HEAD(MK12) VTR-1X2ERS11-155 or	DHVEC01TE005
	HEAD FE VTR-1X2ERS11-167	DHVEC01TE006
B74	PRISM MK10	0VM202870
B86	F BRAKE ASSEMBLY(HI) MK12	0VSA13447
B121	WORM MK12	0VM414091
B126	PULLEY MK12	0VM414330B
B133	IDLER ASSEMBLY(HI) MK12	1VSA12903
B148	TG CAP MK6	0VM407664C
B300	C DRIVE LEVER(TU) MK12	0VM203773
B303	F DOOR OPENER MK12	0VM203751C
B313	C DRIVE SPRING MK12	0VM414145
B347	GUIDE HOLDER A MK10	0VM304920
B354	SLIDER(TU) MK12	0VM101172F
B355	SLIDER(SP) MK12	0VM101182K
B359	CLEANER LEVER MK10	0VM304413
B360	CLEANER ROLLER MK9	0VM410032C
B361	CL POST MK10	0VM411114
B410	PINCH ARM(A) ASSEMBLY(5) MK12	1VSA12881
B411	PINCH SPRING MK12	0VM414644
B414	M BRAKE(SP) ASSEMBLY(HI) MK12 or	0VSA13655
	M BRAKE SP ASSEMBLY HI MK14	1VSA13333
B416	M BRAKE(TU) ASSEMBLY(HI) MK12	0VSA13449
B417	TENSION SPG(3002645) MK12.5	0VM414221G
B425	LOCK LEVER SPRING MK10	0VM411110
B482	CASSETTE PLATE	1VM220271
B483	LOCK LEVER MK12	0VM414095
B487	BAND BRAKE(SP) MK12.5	1VM320582
B488	MODE LEVER(HI) MK12.5	0VM101352
B491	CAM GEAR(A)(HI) MK12	0VM101176G
B492	MODE GEAR(LM) MK12	0VM204236
B494	C DOOR OPENER MK12	0VM305719
B499	T LEVER HOLDER MK12	0VM305729C
B501	WORM HOLDER MK12	0VM203767
B507	REEL WASHER MK9 5*2.1*0.5	0VM410058
B508	S BRAKE SPRING(HI) MK12	0VM414899
B513	P.S.W F 6*2.55*0.5	0VM402629A
B514	SCREW RACK MK14	0VM411535B
B516	REEL WASHER MK9 5*2.1*0.5	0VM410058
B518	P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B521	REV BRAKE SPG(HI) MK12	0VM414943
B522	TG POST ASSEMBLY MK10	0VSA11012
B525	LDG BELT MK11	0VM412804
B529	CLEANER ASSEMBLY MK10	0VSA11161
B551	FF ARM(HI) MK12	0VM306183
B553	REV SPRING MK11	0VM412555
B555	RACK ASSEMBLY MK14	1VSA11842
B557	MOTOR PULLEY U5	0VM403205A
B558	LOADING MOTOR RF-500TB-12560 or	MMDZB12MF003
	LOADING MOTOR M31E-1 R-14 7441	MMDZB12MM009
B559	CLUTCH ASSEMBLY(HI) MK12	0VSA13450
B562	C DRIVE LEVER(SP) MK12	0VM203772
B563	SLIDER SHAFT MK12	0VM305762B
B564	M GEAR(HI) MK12	0VM305755

Ref. No.	Description	Part No.
B565	SENSOR GEAR(HI) MK12	0VM305756
B567	PINCHI ARM(B) ASSEMBLY MK12.5	1VSA12890
B568	BT ARM MK12	0VM305728
B571	P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B572	P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B573	REEL S MK11	0VM203436
B574	REEL T MK10	0VM202872C
B578	TR GEAR A MK10	0VM304440
B579	TR GEAR B MK12	0VM305900
B580	TR GEAR C MK12	0VM305743A
B581	CENTER GEAR MK11	0VM305081
B582	TR GEAR SPRING MK10	0VM411187C
B583	CAM WASHER MK12	0VM414741
B585	PSW(317505) MK11	0VM413663
B587	TENSION LEVER ASSEMBLY MK12	1VSA12878
B590	BRAKE ARM(TU) MK12	0VM203752E
B591	BAND BRAKE(TU) MK12	0VM305724C
B592	TG POST MK10	0VM411108E
L1051	SCREW B-TIGHT M2.6X6 PAN HEAD+	GPJB9060
L1053	SCREW S-TIGHT M2.6X8 WASHER HEAD+	GCJS9080
L1151	SCREW SEMS M2.6X4 PAN HEAD+	CPJ39040
L1191	SCREW S-TIGHT M2.6X8 WASHER HEAD+	GCJS9080
L1321	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
L1322	SCREW B-TIGHT M2.3X4 BIND HEAD+	GBJBY040
L1341	SCREW P-TIGHT M2X6 PAN HEAD+	GPJP2060
L1406	AC HEAD SCREW MK14	0VM410964A
L1450	SCREW SEMS M2.6X5 PAN HEAD+	CPJ39050
L1466	SCREW S-TIGHT M2.6X6 BIND HEAD+	GBJS9060
L1467	SCREW M2.6X5 WASHER HEAD+	SCJ39050